

AMENDMENT TO THE CLAIMS

Claims 1-142 (Cancelled)

143. (Previously presented) A content encoding apparatus comprising:
first through Mth encoding means for encoding an input signal or an
input data file at mutually different compression rates, respectively, (wherein M is an
integer equal to or greater than two); and
means for writing data encoded by said first through Mth encoding
means into a file as independent tracks, respectively.

144. (Previously presented) A content encoding apparatus comprising:
first through Mth encoding means for encoding an input signal or an
input data file at mutually different compression rates, respectively (wherein M is an
integer equal to or greater than one);
means for generating at least one item of error correction code data from
at least one of said first through Mth encode data; and
means for writing the encoded data and the error correction code data
into a file as independent tracks, respectively.

145. (Previously presented) The content encoding apparatus defined in
claim 143, further comprising:
means for Intra-frame encoding the input signal or the input data file; and
means for writing encoded data into a file as an independent track.

146. (Previously presented) A content encoding apparatus comprising:
first through Mth encoding means for encoding an input signal or an
input data file at mutually different compression rates (wherein M is an integer equal to
or greater than two); and

means for writing plural items data encoded by said first through Mth encoding means with a preset time difference or with interleaving, into a file as independent tracks, respectively.

147. (Previously presented) A content encoding apparatus comprising:
means for encoding an input signal or an input data file at mutually different compression rates, respectively, (wherein M is an integer equal to or greater than one);

means for generating at least one item of error correction code data from at least one of said first through Mth encoded data; and

means for writing the encoded data and the error correction code data, with a predetermined time difference or with interleaving, into a file as independent tracks, respectively.

148. (Previously presented) The content encoding apparatus defined in claim 146, further including:

means for Intra-frame encoding the input signal or the input data file; and

means for writing encoded data, with a predetermined time difference or with interleaving, into a file as an independent track.

149. (Previously presented) The content encoding apparatus defined in claim 143, wherein when the M is the integer equal to or greater than two and the encoding is performed, at least one of said second through Mth encoding means performs the encoding using an encoding parameter in encoding processing at said first encoding means.

150. (Previously presented) The content encoding apparatus defined in claim 143, wherein when the M is the integer equal to or greater than two, first through

Mth encoded data output from said first through Mth encoding means are identical in encoding scheme and frame configuration thereof.

151. (Previously presented) The content encoding apparatus defined in claim 143, wherein in case the M is the integer equal to or greater than two, the first through Mth encoded data output from said first through Mth encoding means are obtained by encoding the input signal or data in at least one of a same time period and a same location as an encoding unit and written into a file.

152. (Previously presented) The content encoding apparatus defined in claim 143, wherein in case the M is the integer equal to or greater than two, the compression rates for the encoded data of the second through Mth encoding means are equal to or higher than a compression rate for the encoded data of said first encoding means.

153. (Previously presented) The content encoding apparatus defined in claim 144, wherein when plural items of the error correction code data are generated from the encoded data in said content encoding apparatus, each of the error correction code data is at least one of:

(a) the error correction code data obtained by different error correction encoding schemes; and

(b) the error correction code data obtained by the same error correction encoding scheme but by a different setting.

154. (Currently amended) A content distribution apparatus comprising:
means for reading at least one item of encoded data from a content file;
and

first through Nth encoded data transmission means for receiving the read encoded data and outputting first through Nth encoded data (wherein N is an integer equal to or greater than two); ~~and~~

~~means for multiplexing the data output from at least two of said first through Nth encoded data transmission means, for transmission;~~

at least a part of the first through Nth encoded data obtained by said first through Nth encoded data transmission means being transmitted.

155. (Currently amended) A content distribution apparatus comprising:

means for reading at least one item of encoded data and at least one item of error correction code data from a content file;

first through Nth encoded data transmission means for receiving the read encoded data and outputting first through Nth encoded data (wherein N is an integer equal to or greater than one); and

at least one error correction code data transmission means for receiving the read error correction code data and outputting the error correction code data; ~~and~~

~~means for multiplexing the data output from at least two of said first through Nth encoded data transmission means, for transmission;~~

at least one of (a) at least a part of the first through Nth encoded data₁ and (b) at least a part of the error correction code data₂ being transmitted.

156. (Previously presented) The content distribution method defined in claim 154, further comprising:

means for reading at least one item of Intra-frame encoded data from said content file; and

intra-frame encoded data transmission means for transmitting at least one Intra-frame encoded data read;

at least a part of the Intra-frame encoded data being transmitted.

157. (Currently amended) A content distribution apparatus comprising:

means for reading at least one item of encoded data from a content file;

and

first through Nth encoded data transmission means for receiving the read encoded data and outputting first through Nth encoded data (wherein N is an integer equal to or greater than two); ~~and~~

~~means for multiplexing the data output from at least two of said first through Nth encoded data transmission means, for transmission;~~

at least a part of the data from said first through Nth encoded data transmission means being transmitted with time difference or interleaving.

158. (Currently amended) A content distribution apparatus comprising:

means for reading at least one item of encoded data and at least one item of error correction code data from a content file;

first through Nth encoded data transmission means for receiving the read encoded data and outputting first through Nth encoded data (wherein N is an integer equal to or greater than one); and

at least one error correction code data transmission means for receiving the read error correction code data and outputting the error correction code data; ~~and~~

~~means for multiplexing the data output from at least two of said first through Nth encoded data transmission means, for transmission;~~

at least one of: a) at least a part of the first through Nth encoded data, respectively; and (b) at least a part of the error correction code data; being transmitted with time difference or interleaving.

159. (Previously presented) The content distribution apparatus defined in claim 157, further comprising:

means for reading at least one item of Intra-frame encoded data from said content file; and

Intra-frame encoded data transmission means for transmitting the at least one read-in Intra-frame encoded;

at least a part of the Intra-frame encoded data being transmitted with a time difference or interleaving.

160. (Previously presented) The content distribution apparatus defined in claim 157, wherein the time difference or the interleaving is set according to one of:

- a state of a transmission path;
- compression rates for encoding;
- a distribution rate; and
- a predetermined rule.

161. (Previously presented) The content distribution apparatus defined in claim 157, further including:

means for notifying setting of the time difference or interleaving to a content receiving apparatus using at least one of call connection processing and a predetermined method.

162. (Previously presented) The content distribution method defined in claim 154, including:

means for notifying at least one of:

a type of the encoded data for transmission;

a setting of the encoding;

a number of the encoded data;

a type of error correction encoding;

setting of the error correction encoding;

a number of the error correction code data; and

a number of the Intra-frame encoded data;

to said content receiving apparatus, using the call connection processing.

163. (Previously presented) The content distribution apparatus defined in claim 154, wherein in case the N is the integer equal to or greater than two, each transmitting unit of the first through Nth encoded data is an encoded data unit obtained by encoding information on a same location of a same medium or in a same time period.

164. (Previously presented) The content distribution apparatus defined in claim 163, including:

means for assigning a same identification number to the same transmitting unit of the first through Nth encoded data, respectively, in case the N is the integer equal to or greater than two.

165. (Previously presented) The content distribution apparatus defined in claim 163, including:

means for assigning to the encoded data transmitting unit of at least one of the first through Nth encoded data information allowing identification to which one of the encoded data the encoded data transmitting unit belongs.

166. (Previously presented) The content distribution apparatus defined in claim 154, wherein at least one of said first through Nth encoded data transmission means includes means for selecting whether to transmit the at least a part of the data for transmission or not according to at least one of the distribution rate and the state of the transmission path.

167. (Previously presented) The content distribution apparatus defined in claim 154, wherein when selecting the part of the data for transmission, at least one of said first through Nth encoded data transmission means includes means for selecting the data according to a property of encoding information or the predetermined rule.

168. (Previously presented) The content distribution apparatus defined in claim 154, comprising:

means for encrypting the at least a part of the data, for transmission.

169. (Previously presented) The content distribution apparatus defined in claim 168, comprising:

means for controlling at least one of:

presence or absence of the encryption;

a distribution destination of an encryption key;

an encryption scheme; and

an intensity of the encryption, thereby controlling at least one of quality, stability, and confidentiality of contents to be distributed on a content distribution side.

170. (Previously presented) The content distribution apparatus defined in claim 154, comprising:

means for transmitting the data to be output from said first through Nth encoded data transmission means using different sessions, respectively.

171. (Previously presented) The content distribution apparatus defined in claim 154, comprising:

at least one means for multiplexing at least two outputs of the output data output from said encoded data transmission means;

the multiplexed data and the data not multiplexed being transmitted using different sessions, respectively.

172. (Previously presented) The content distribution method defined in claim 170, wherein multicast or broadcast transmission is performed using at least one session for distribution.

173. (Previously presented) The content distribution apparatus defined in claim 170, comprising:

means for controlling a notification destination of session information on a session for transmitting the data, thereby controlling quality and stability of contents to be distributed on a content distribution side.

174. (Previously presented) The content distribution apparatus defined in claim 170, comprising:

means for performing at least one of routing priority control on a transmission path and power control on a wireless transmission path using at least one of sessions for distributing the data.

175. (Currently amended) A content receiving apparatus comprising:
means for receiving ~~multiplexed~~ encoded data from at least one session,
and identifying individual ones of the encoded data therefrom; and
means for extracting the encoded data received with no transmission
error and no dropout from among the received encoded data and reconstructing the
encoded data.

176. (Currently amended) A content receiving apparatus comprising:
means for receiving encoded data and error correction code data ~~that~~
~~have been multiplexed~~, from at least one session and identifying individual ones of the
encoded data and the error correction code data therefrom; and
means for extracting the encoded data received with no transmission
error and no dropout from among the received data and for restoring the encoded data
using the error correction code data when the transmission error or the dropout is
present to reconstruct the encoded data.

177. (Currently amended) The content receiving apparatus defined in
claim 175, further including:
means for receiving the encoded data and the Intra-frame encoded data
~~that have been multiplexed~~ from at least one session and identifying individual ones of
the encoded data therefrom.

178. (Previously presented) The content receiving apparatus defined in
claim 177, wherein means for reconstructing the encoded data selects the
Intra-frame encoded data by a predetermined device.

179. (Previously presented) The content receiving apparatus defined in
claim 175, including:
means for restoring the encoded data using at least one of:

an encryption key obtained by call connection processing when the encoded data is encrypted;

a distributed encryption key; and
a predetermined encryption key.

180. (Previously presented) The content receiving apparatus defined in claim 175, further comprising:

means for selecting whether to receive the data by at least one of the encoded data receiving means based on at least one of:

error/loss rate of received data;
available power; and
setting set in advance.

181. (Previously presented) The content receiving apparatus defined in claim 175, further including:

a step of selecting whether to receive at least one of the error correction code data when receiving the at least one of the error correction code data or the error correction code data used in error correction processing, based on at least one of:

error/loss rate of received data;
error/loss state of data on a transmission path;
error correction encoding scheme;
available power; and
setting set in advance.

182. (Previously presented) The content receiving apparatus defined in claim 175, wherein the means for reconstructing the encoded data determines whether the encoded data is duplicated or not based on an identification number assigned to a transmitting unit of the encoded data.

183. (Currently amended) The content receiving apparatus defined in claim 175, wherein the means for reconstructing the encoded data comprises means for determining at least one of a compression rate and a data type of the encoded data using at least one of:

[[~~(e)~~]] (a) a predetermined distribution data receiving session;

[[~~(f)~~]] (b) predetermined data identification information assigned to the transmitting unit of the data;

[[~~(g)~~]] (c) a distribution data receiving session, notified by the call connection processing; and

[[~~(h)~~]] (d) data identification information assigned to the transmitting unit of the data and notified by the call connection processing.

184. (Currently amended) The content receiving apparatus defined in claim 175, wherein a unit of the encoded data transmitted by interleaving the unit or providing a time difference for the unit can be received, and a buffer size determined by at least one of:

[[~~(i)~~]] (a) a predetermined receive buffer size;

[[~~(j)~~]] (b) a buffer size notified by the call connection processing;

[[~~(k)~~]] (c) a buffer size calculated based on a predetermined content distribution rate and information on a time difference or interleave setting; and

[[~~(l)~~]] (d) a buffer size calculated based on a content distribution rate notified by the call connection processing and the information on the time difference or interleave setting; is secured so that the encoded data can be reconstructed.

185. (Previously presented) The content receiving apparatus defined in claim 175, comprising:

means for transmitting a reception status of distributed data to a content distribution apparatus.

186. (New) The content distribution apparatus defined in claim 154, further comprising:

means for multiplexing the data output from at least two of said first through Nth encoded data transmission means, for transmission.

187. (New) The content distribution apparatus defined in claim 155, further comprising:

means for multiplexing the data output from at least two of said first through Nth encoded data transmission means, for transmission.

188. (New) The content distribution apparatus defined in claim 157, further comprising:

means for multiplexing the data output from at least two of said first through Nth encoded data transmission means, for transmission.

189. (New) The content distribution apparatus defined in claim 158, further comprising:

means for multiplexing the data output from at least two of said first through Nth encoded data transmission means, for transmission.